1-6 Polygons

polygon--closed figure, whose sides are all segments

- sides have a common endpoint and are non collinear
- each side intersects exactly 2 other sides

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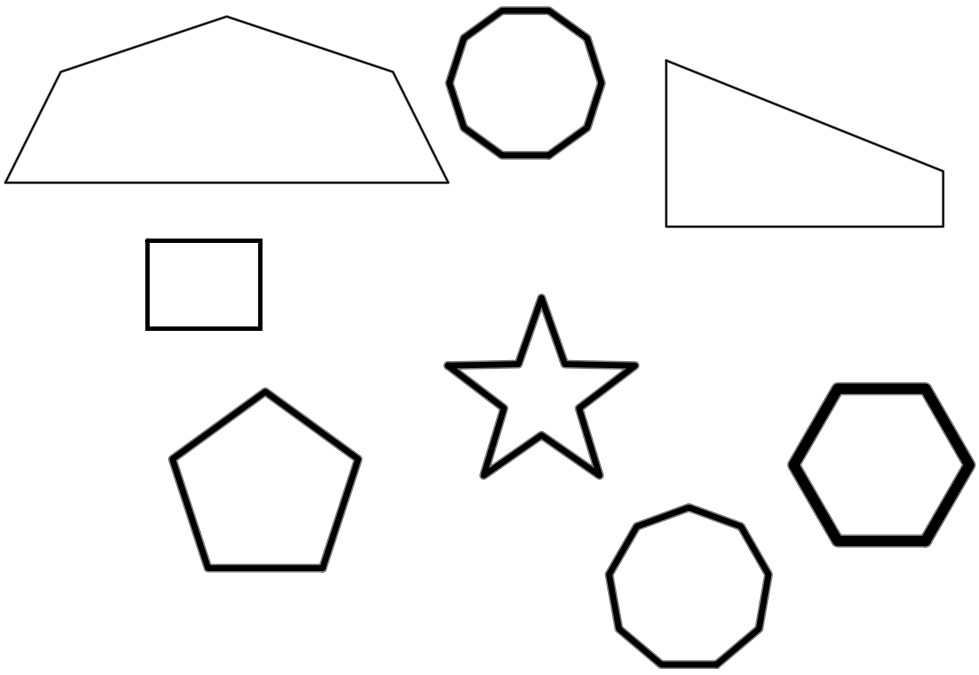
Examples



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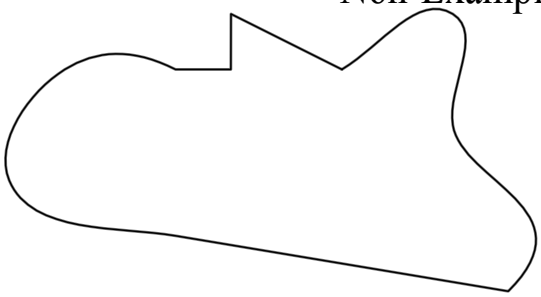
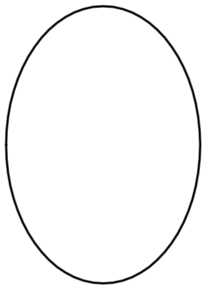
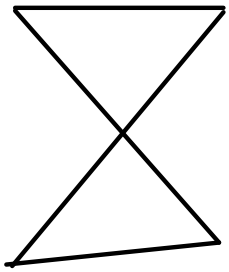
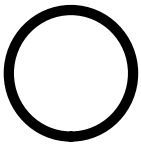
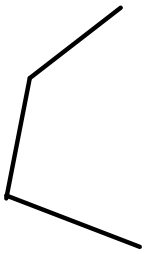
Non-Examples











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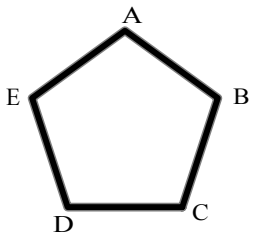
Name by the vertices, in consecutive order



ABCDE

DCBAE

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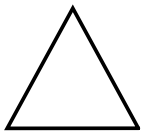
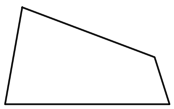
Types of Polygons

Shape	# of sides	Name
	3	Triangle
	4	Quadrilateral
	5	Pentagon
	6	Hexagon

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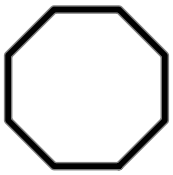
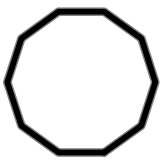
	7	Heptagon
	8	Octagon
	9	Nonagon
	10	Decagon

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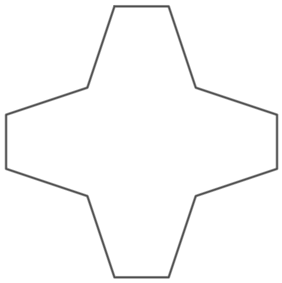
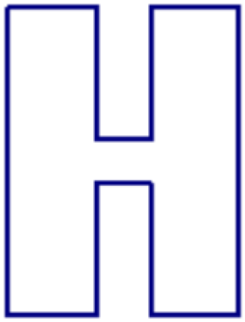
11-gon



12-gon

Dodecagon



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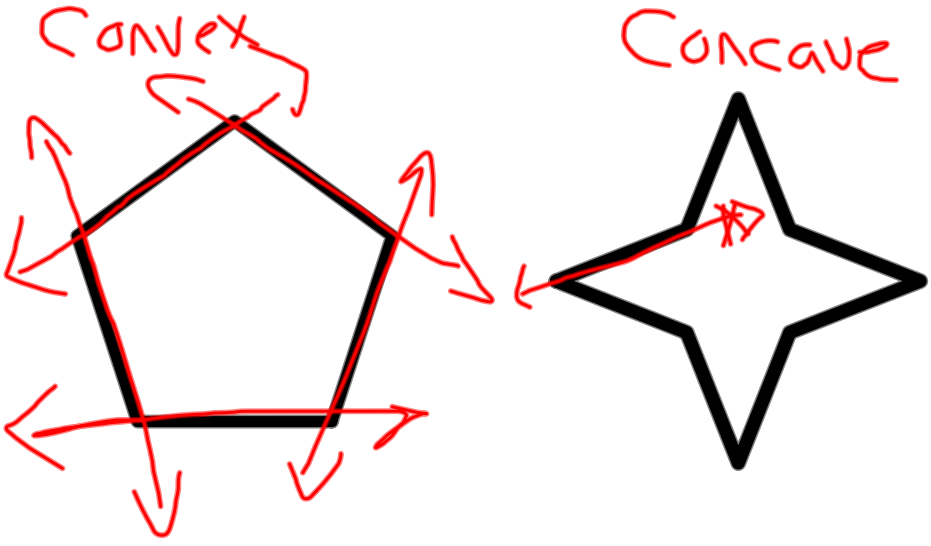
Convex--A polygon is convex, if the line containing a side does not contain points on the interior of the polygon

Concave--Not convex



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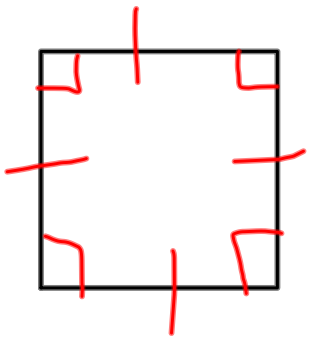
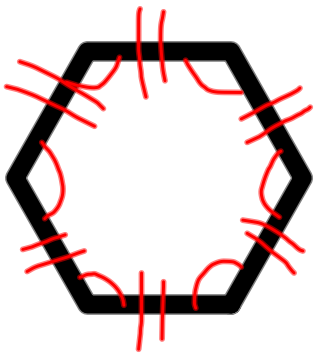
Regular Polygon--convex polygon where all of the sides are congruent, and all of the angles are congruent





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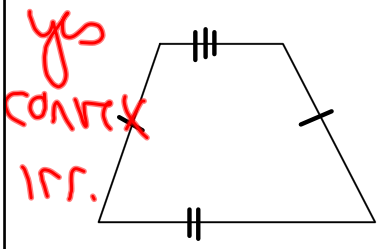
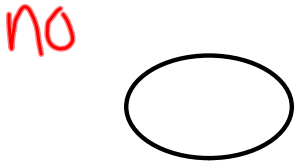
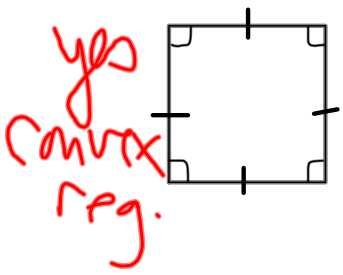
Classify the following figures as:

- polygon or not (if polygon, what type)
- convex or concave
- regular or irregular







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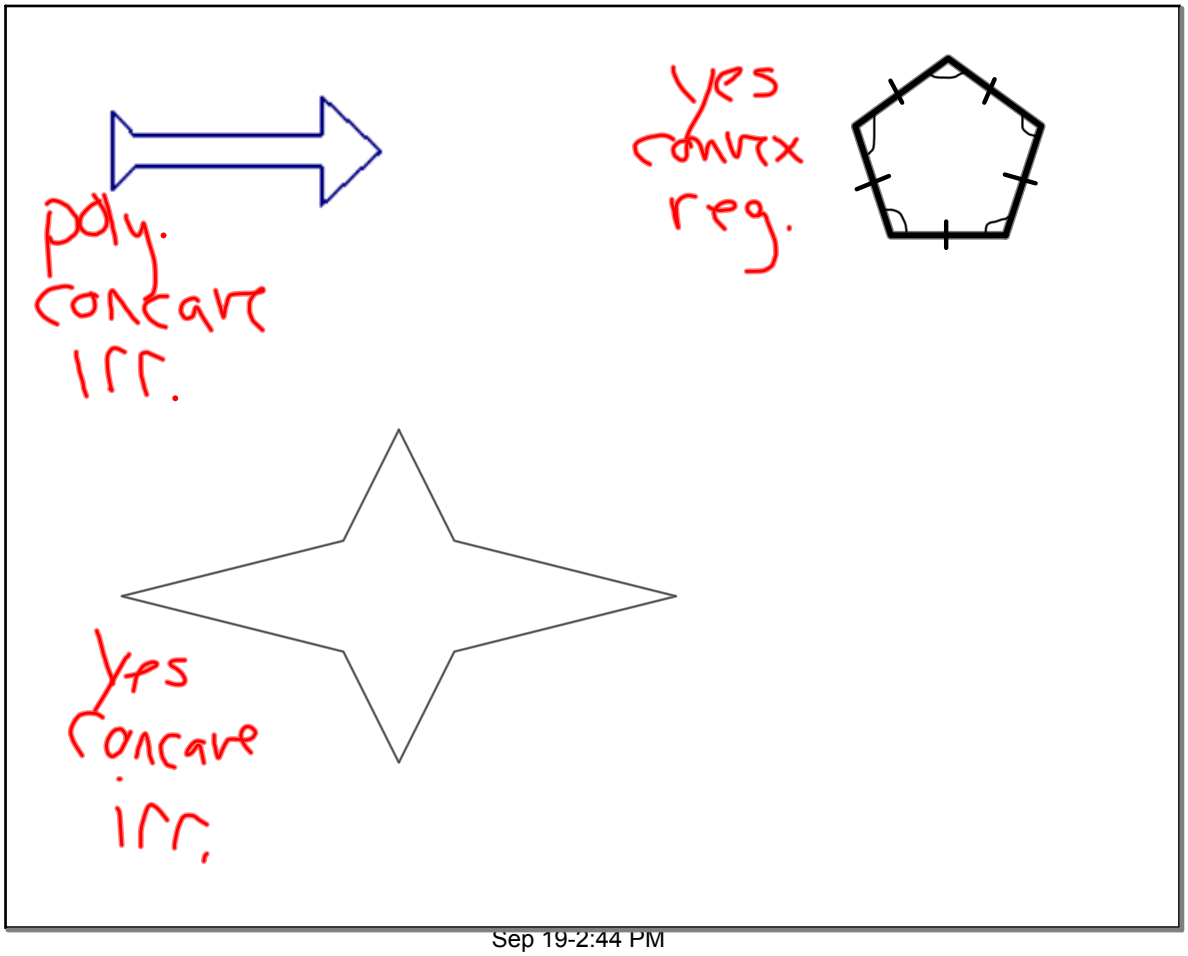

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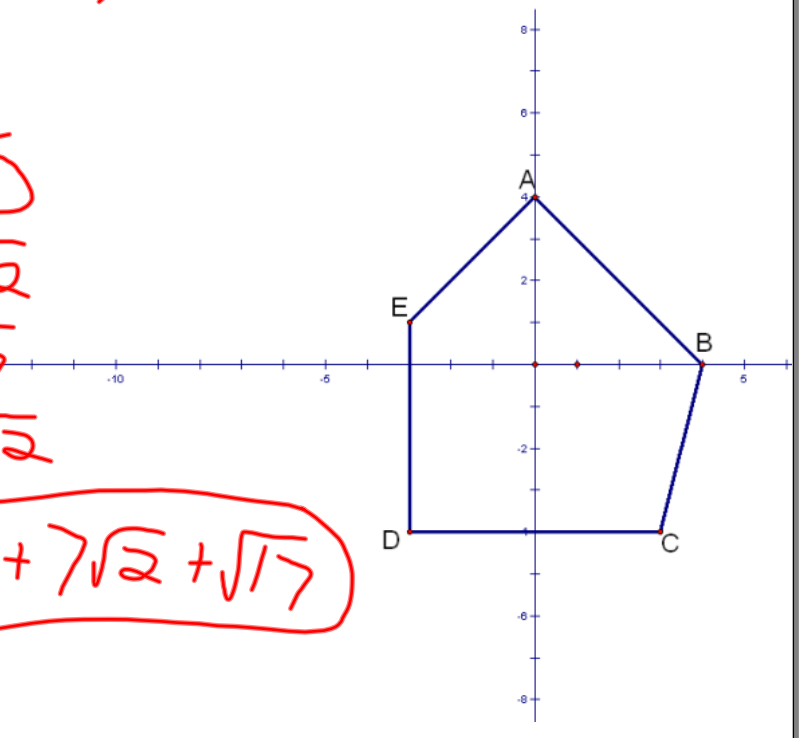
Find the perimeter of ABCDE

A(0, 4) B(4, 0) C(3, -4) D(-3, -4) E(-3, 1)



$CD = 6$

$DE = 5$

$AB = 4\sqrt{2}$

$BC = \sqrt{17}$

$AE = 3\sqrt{2}$

$P = 11 + 7\sqrt{2} + \sqrt{17}$

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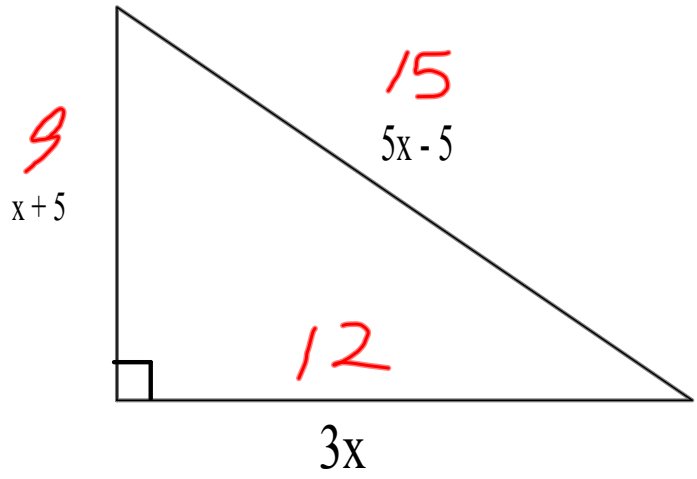
If the perimeter of the triangle below is 36 units, find the length of the sides.



$x + 5 + 5x - 5 + 3x = 36$

$9x = 36$

$x = 4$

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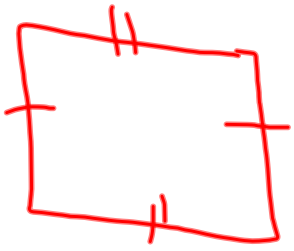
Due: Wed

HW

p48-50

#s 5-8, 26, 29-33



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